



A.D. 1855 N° 500.

S P E C I F I C A T I O N

OF

THOMAS LAWSON
AND
MATTHEW THOMPSON.

CONSUMPTION AND PREVENTION OF SMOKE.

L O N D O N :

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
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1855.



A.D. 1855 N° 500.

Consumption and Prevention of Smoke.

(This Invention received Provisional Protection, but notice to proceed with the application for Letters Patent was not given within the time prescribed by the Act.)

PROVISIONAL SPECIFICATION left by Thomas Lawson and Matthew Thompson at the Office of the Commissioners of Patents, with their Petition, on the 6th March 1855.

We, THOMAS LAWSON, Engineer, and MATTHEW THOMPSON, Fire Brick
5 Manufacturer, both of Gateshead-on-Tyne, in the County of Durham, do hereby declare the nature of the said Invention for “**IMPROVEMENTS IN THE CONSUMPTION AND PREVENTION OF SMOKE**” to be as follows:—

This Invention relates to a peculiar arrangement and construction of flues
& air passages in furnaces, whereby a better combustion of the gases is
10 obtained and the consumption of smoke effected. The arrangement consists in construction of a number of narrow flues of fire brick; half thicks are preferred for this purpose behind the back part of the furnace and underneath the bottom of the boiler, &c. These flues or passages are placed or formed one above the other, and may vary from 3 to 4 feet in length; or they may be
15 of greater or less length, as circumstances may require; but 3 or 4 feet will be found to answer generally. A small quantity of air is admitted from the ash-pit through a regulating valve or valves into the lowest range of the narrow flues, herein-before referred to; the air passing through those flues entirely separate from the smoke and gases, and mingling with and effecting the con-

Lawson & Thompson's Impts. in the Consumption & Prevention of Smoke.

sumption of such smoke and gases at the end of the upper tiers of flues furthest from the furnace. A bridge is placed a short distance from that end of the smoke and air flues furthest from the furnace, so as to form a species of combustion chamber, wherein the smoke and gases will be effectually consumed.

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